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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,580	08/20/2003	Viggo L. Norum	03191/000N040-US0	5203
7278	7590	06/29/2004	EXAMINER	
DARBY & DARBY P.C.			ABDELNOUR, DENNIS J	
P. O. BOX 5257			ART UNIT	PAPER NUMBER
NEW YORK, NY 10150-5257			3681	

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/644,580

Applicant(s)

NORUM, VIGGO L.

Examiner

Dennis J. Abdelnour

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 02/04/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

The following is a first action on the merits of application serial 10/644,580 filed on August 20, 2003. Claims 1-10 are pending.

#### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

#### *Drawings*

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the *actuating shaft comprising at least two outward-directed guide pins and each of the sleeves having an internal groove (in Claim 7)* must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The

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replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2 and 4-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Takei (USPN 5,540,113).

Takei discloses in Figure 2 an actuator comprising:

a central actuating shaft (33) with a shift finger (31) and further comprising two sleeves (35 and 36) supported substantially concentrically on the actuating shaft (33) and arranged to be driven in mutually independent rotation about the actuating shaft (33), wherein two grooves (33a and 33b) of opposite helical pitch are arranged on the actuating shaft (33) and each of the sleeves (35 and 36) has at least one inward-directed guide pin (41) engaging one of the grooves (33a and 33b);

two motors (59 and 60) driving the independent rotation of the two sleeves (35 and 36), each of the two sleeves being driven by one of the two motors;

wherein the two grooves (40, 41) are arranged in adjacent axial sections of the shaft;

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parts of the two grooves share an axial section of the shaft; and  
one of the two grooves has a clockwise helical pitch and the other of the two grooves has a counterclockwise helical pitch.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 7-8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takei in view of Black (USPN 5,704,250).

Takei has been described above. Takei does not show each of the sleeves having an internal groove engaging with two outwardly directed pins on the actuating shaft.

Black discloses in Figure 3 an actuator comprising sleeves (54 and 56) having internal grooves engaging with outwardly directed pins (62 and 64) on the actuating shaft.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Takei by forming internal grooves on the actuating sleeves rather than external grooves on the actuating shaft as taught by Black in order to simplify the manufacturing procedure.

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takei.

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Takei has been described above. Takei does not disclose two reduction gear mechanisms, each being interposed between one of the two sleeves and one of the two motors. Takei does, however, disclose two pulley mechanisms (56 and 57), each being interposed between one of the two sleeves (35 and 36) and one of the two motors (59 and 60). The pulley mechanisms act as speed reducers. Gear reduction mechanisms are a well known type of speed reducer.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Takei by replacing the pulley mechanisms with gear reduction mechanisms in order to transmit a higher load capacity.

8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takei in view of Black.

Takei in view of Black has been described above. Takei in view of Black does not disclose two reduction gear mechanisms, each being interposed between one of the two sleeves and one of the two motors. Takei does, however, disclose two pulley mechanisms (56 and 57), each being interposed between one of the two sleeves (35 and 36) and one of the two motors (59 and 60). The pulley mechanisms act as speed reducers. Gear reduction mechanisms are a well known type of speed reducer.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Takei in view of Black by replacing the pulley mechanisms with gear reduction mechanisms in order to transmit a higher load capacity.

### *Conclusion*

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USPN 5,647,245 to Takei is similar to the Takei '113 reference. USPN 4,210,063 and USPN 4,031,765 both disclose actuating shafts having two threads of opposite pitch. USPN 5,649,451 to Ruland discloses a similar actuator comprising two motors, two actuating sleeves, and each actuating sleeve is coupled to a different race on the actuating shaft.

### *Facsimile Transmission*

10. Submission of your response by facsimile transmission is encouraged. Group 3600's facsimile number is **(703) 872-9326**. Recognizing the fact that reducing cycle time in the processing and examination of patent applications will effectively increase a patent's term, it is to your benefit to submit responses by facsimile transmission whenever permissible. Such submission will place the response directly in our examining group's hands and will eliminate Post Office processing and delivery time as well as the PTO's mailroom processing and delivery time. For a complete list of correspondence not permitted by facsimile transmission, see MPEP 502.01. In general, most responses and/or amendments not requiring a fee, as well as those requiring a fee but charging such fee to a deposit account, can be submitted by facsimile transmission. Responses requiring a fee which applicant is paying by check should not be submitting by facsimile transmission separately from the check.

Responses submitted by facsimile transmission should include a Certificate of Transmission (MPEP 512). The following is an example of the format the certification might take:

I hereby certify that this correspondence is being facsimile transmitted to  
the Patent and Trademark Office (Fax No. (703) 305-3597) on \_\_\_\_\_

(Date)

Typed or printed name of person signing this certificate:

\_\_\_\_\_

\_\_\_\_\_  
(Signature)

If your response is submitted by facsimile transmission, you are hereby reminded that the original should be retained as evidence of authenticity (37 CFR 1.4 and MPEP 502.02). Please do not separately mail the original or another copy unless required by the Patent and Trademark Office. Submission of the original response or a follow-up copy of the response after your response has been transmitted by facsimile will only cause further unnecessary delays in the



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processing of your application; duplicate responses where fees are charged to a deposit account may result in those fees being charged twice.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis J. Abdelnour whose telephone number is (703) 305-5309. The examiner can normally be reached on Monday-Friday, 8:00-5:30, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on (703) 308-0830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

June 21, 2004

*AA*

DA

*Charles A Marmor 6/22/04*  
CHARLES A. MARMOR  
SUPERVISORY PATENT EXAMINER  
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